

We claim:

But C2 1. A method of inducing weight loss in a mammal comprising administering a ciliary neurotrophic factor protein to either the nasal or the respiratory passages of said mammal.

2. The method of claim 1, wherein the mammal is a human.

But C3 3. The method of claim 2, wherein said method is for the treatment of diet induced obesity or obesity of a genetically determined origin.

4. The method of claim 2, wherein said ciliary neurotrophic factor protein is AX-15.

5. The method of claim 2, wherein said ciliary neurotrophic factor protein is AX-2.

6. A method of preventing the occurrence of gestational or adult onset diabetes in a human comprising administering a ciliary neurotrophic factor protein to either the nasal or the respiratory passages of said human

But C4 7. A method of treating gestational or adult onset diabetes in a human comprising administering a ciliary neurotrophic factor protein to either the nasal or the respiratory passages of said human.

8. The method according to any one of claims 1 to 7, wherein said ciliary neurotrophic factor protein is pegylated.

9. The method according to any one of claims 1 to 7, wherein said ciliary neurotrophic factor protein is administered intranasally.

10. The method according to any one of claims 1 to 7, wherein said ciliary neurotrophic factor protein is administered intratracheally.

5 11. The method according to any one of claims 1 to 7, wherein said ciliary neurotrophic factor protein is administered by use of a nebulizer.

12. The method according to claim 6 or 7, wherein said ciliary neurotrophic factor protein is AX-15.

10 13. The method according to claim 6 or 7, wherein said ciliary neurotrophic factor protein is AX-2.

14. A composition useful for the treatment of obesity or gestational or adult onset diabetes in a mammal comprising a formulation of a ciliary neurotrophic factor protein suitable for intranasal administration.

15. A composition useful for the treatment of obesity or gestational or adult-onset diabetes comprising a formulation of a ciliary neurotrophic factor protein suitable for be administered by a nebulizer to a mammal.

16. The composition according to claim 14 or 15, wherein said ciliary neurotrophic factor protein is AX-15.

25 17. The composition according to claim 14 or 15, wherein said ciliary neurotrophic factor protein is AX-13.

18. A method of treating a disorder responsive to ciliary neurotrophic factor in a patient, comprising administering said ciliary neurotrophic factor to either the nasal or respiratory passages of said patient.

19. The method of claim 18, wherein said disorder is a degenerative disorder involving the spinal cord, cholinergic neurons, hippocampal neurons or motor neurons.

20. A method of treating a disorder responsive to ciliary neurotrophic factor in a patient, comprising administering said ciliary neurotrophic factor to either the eye or oral passages of said patient.

21. The method of claim 20, wherein said disorder is obesity or adult onset or gestational diabetes.

22. The method of claim 18 or 20, wherein said ciliary neurotrophic factor is pegylated.